

Claims

- [c1] A signal transmitting/receiving apparatus, comprising:
a transmitting device for transmitting data;
a receiving device for receiving the data; and
a data line for transmitting the data,
wherein the transmitting device and the receiving device
are connected to each other through the data line,
the transmitting device comprising:
a driver circuit for outputting the data to the data line,
the receiving device comprising:
a terminating resistor connected to the data line;
a receiver circuit for detecting the data from the data
line; and
a bias generating means for generating a bias voltage to
be applied to the terminating resistor,
the bias generating means setting the bias voltage based
on the potential of the data line.
- [c2] A signal transmitting/receiving apparatus according to
claim 1, wherein the bias generating means comprises a
bias generating circuit and a reference voltage generat-
ing circuit.
- [c3] A signal transmitting/receiving apparatus according to

claim 1, wherein the data line comprises a pair of differential lines.

[c4] A signal transmitting/receiving apparatus according to claim 3, wherein the terminating resistor is connected so as to short circuit between the pair of differential lines, whereby the bias voltage is applied to substantially a midpoint of the terminating resistor.

[c5] A signal transmitting/receiving apparatus according to claim 1, further comprising a ground interconnect line for connecting a ground of the transmitting device and a ground of the receiving device.

[c6] A signal transmitting/receiving apparatus according to claim 1, wherein the data line has flexibility.

[c7] A signal transmitting/receiving apparatus according to claim 5, wherein the ground interconnect line has flexibility.

[c8] A receiving device connected to a data line which transmits data, so as to receive the data from the transmitting device,
the transmitting device comprising a driver circuit for outputting the data to the data line,
the receiving device comprising:
a terminating resistor connected to the data line;

a receiver circuit for detecting the data from the data line; and
a bias generating means for generating the bias voltage and outputting the bias voltage to the terminating resistor,
the bias generating means setting the bias voltage based on a potential of the data line.

[c9] A receiving device according to claim 8, wherein the bias generating means comprises a bias generating circuit and a reference voltage generating circuit.

[c10] A receiving device according to claim 8, wherein:
the data line comprises a pair of differential lines;
the terminating resistor short circuits between the pair of differential lines; and
the bias voltage is applied at substantially a midpoint of the terminating resistor.

[c11] A receiving device according to claim 8, further connected to a ground interconnect line which transmits a ground potential of the transmitting device.

[c12] A signal transmitting/receiving apparatus, comprising:
a transmitting device for transmitting a plurality of data;
a receiving device for receiving a plurality of data; and
a plurality of data lines for transmitting the plurality of

data,
wherein the transmitting device and the receiving device
are connected to each other through the plurality of data
lines,
the transmitting device comprising a plurality of driver
circuits for outputting the plurality of data to the plural-
ity of corresponding data lines, respectively,
the receiving device comprising:
a plurality of terminating resistors connected to the plu-
rality of corresponding data lines, respectively;
a plurality of receiver circuits for detecting the plurality
of data from the plurality of data lines, respectively; and
at least one bias generating means for generating a bias
voltage to be applied to the plurality of terminating re-
sistors,
the at least one bias generating means sets the bias
voltage based on at least one potential among those of
the plurality of data lines.

[c13] A signal transmitting/receiving apparatus according to
claim 12, wherein at least one of the plurality of termi-
nating resistors and the at least one bias generating
means are connected through an electric resistance.

[c14] A signal transmitting/receiving apparatus according to
claim 12, wherein at least one of the plurality of termi-
nating resistors and the at least one bias generation

means are connected through an amplifier.